**DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1x.28

# WELDING INSPECTION REPORT

**Resident Engineer:** Casey, William
**Address:** 333 Burma Road
**City:** Oakland, CA 94607

**Report No:** WIR-026587
**Date Inspected:** 31-Oct-2011

**Project Name:** SAS Superstructure
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV
**Contractor:** American Bridge/Fluor Enterprises, a JV

**OSM Arrival Time:** 630
**OSM Departure Time:** 1730
**Location:** Onsite

**CWI Name:** Pat Swain

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| **Inspected CWI report:** | ☐ Yes | ☑ No | ☐ N/A | **CWI Present:** | ☑ Yes | ☐ No | |
| **Electrode to specification:** | ☑ Yes | ☐ No | ☐ N/A | **Rod Oven in Use:** | ☑ Yes | ☐ No | ☐ N/A |
| **Qualified Welders:** | ☑ Yes | ☐ No | ☐ N/A | **Weld Procedures Followed:** | ☑ Yes | ☐ No | ☐ N/A |
| **Approved Drawings:** | ☑ Yes | ☐ No | ☐ N/A | **Verified Joint Fit-up:** | ☐ Yes | ☑ No | ☐ N/A |
| | | | | **Approved WPS:** | ☑ Yes | ☐ No | ☐ N/A |
| | | | | **Delayed / Cancelled:** | ☐ Yes | ☑ No | ☐ N/A |

**Bridge No:** 34-0006
**Component:** OBG Sections

**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Art Peterson arrived on site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor the welding operations performed by American Bridge Fluor (ABF) welding personnel. The following observations were:

OBG Deck Plate Section 12W ~ 13W:

This QA Inspector randomly observed ABF welder Mr. Fred Kaddu performing the back-gouge operation on I-Rib Longitudinal Stiffener (LS-5) double groove weld on the inside of OBG Deck "A" Plate Section 12W ~ 13W. Afterwards, QC Inspector Mr. Pat Swain performed the Magnetic Particle Test (MPT) inspection per the dry method to ensure the soundness of the back-gouge operation prior to the start of the weld operation of the second side. The MPT inspection results were in compliance with AWS D1.5 -2002 Section 6.26.2 and the contract specifications.

This QA Inspector randomly observed ABF welder Mr. Fred Kaddu (Welder ID 2188) performing the root, fill and cover pass weld operation per the SMAW process in the (3G) Vertical position on I-Rib Longitudinal Stiffener (LS-5) on the inside of OBG Deck "A" Plate Section 12W ~ 13W. At this location, the I-Rib LS is A709 GR. 485 material. This QA Inspector observed QC Inspector Mr. Pat Swain verify prior to the start of the welding operation that the welding parameters (Amps, Volts, and Travel Speed) and preheat temperature were in accordance with WPS -D1.5 1012-3 Revision 0. This QA Inspector verified that the 9018M electrodes being used to perform the root, fill, and cover pass weld operation were stored and removed from a heated quiver. This QA Inspector observed that ABF welder Mr. Kaddu completed the second side of the double groove weld at this location. The heat induction blanket remained in place on the opposite side of the weld joint and the temperature of the weld and

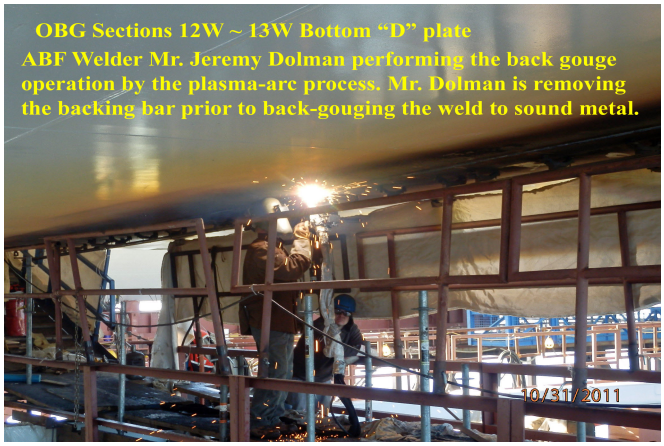
surrounding base metal were held at a temperature of 200 degrees F for a minimum of 3 hours as part of the post heat treatment required at this location.

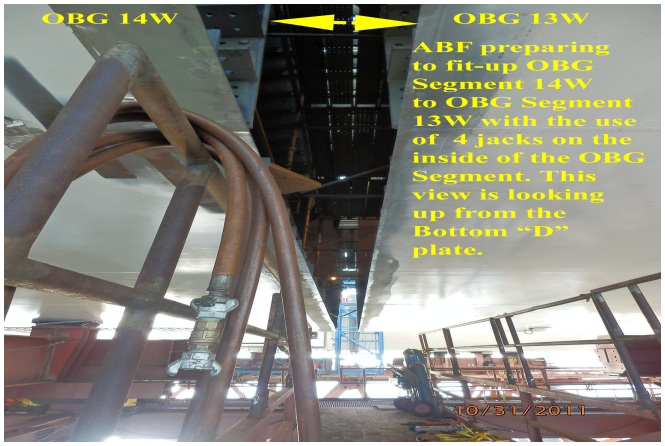
OBG Edge Plate Section 12E ~ 13E:
This QA Inspector randomly observed ABF QC Inspector Mr. John Pagliero performing Ultrasonic Testing (UT) inspection on OBG Edge "F" plate section 12E / 13E. The weld length of the "F" plate is 2330 mm. This QA Inspector observed that Mr. Pagliero detected a rejectable ultrasonic indication at "Y" location 2020 mm. The edge plate section is 18 mm thick and the depth of the ultrasonic indication was 13 mm from the "A" face. The length of the indication was 25 mm and the indication rating was a (+10) db.

OBG Bottom Plate Section 12W ~ 13W:
This QA Inspector randomly observed ABF Welder Mr. Jeremy Dolman performing the back-gouge operation on OBG Bottom "D" plate section 12W ~ 13W per the plasma arc process to remove the backing bar prior to back-gouging the weld to sound metal in preparation to weld the second side of a double groove weld. The plasma-arc gouging process was in-process at the end of this QA Inspectors' shift.

OBG Sections' 13W ~ 14W:
This QA Inspector randomly observed ABF personnel preparing to fit-up and align OBG Section 14W to OBG Section 13W. This QA Inspector observed 4 hydraulic jacks placed on the inside of the OBG Section 13W on either side of the full height Longitudinal Diaphragm at grid lines W3 and W4. The hydraulic jacks will be used to move OBG Section 14W towards OBG Section 13W. Initially the hydraulic pressure to start the movement of OBG Section 14W was 1800 PSI and once the OBG Section started moving, 1100 PSI was required to move OBG Section 14W to its final position joining OBG Section 13W and the ABF personnel will prepare the OBG Sections for the final fit-up and alignment prior to the start of the welding operations of the field weld splices. This QA Inspector observed that the final fit-up and alignment was in-process at the end of this QA Inspectors' shift.

Weld Tracking and QA NDT Spreadsheet for OBG Sections:
This QA Inspector is updating the Weld Tracking and QA NDT spreadsheets for tracking the Field welds from the start to the finish on the OBG Sections to ensure the required QA NDT inspection has been performed, all weld repairs have been completed and the final NDT has been completed and found to be in compliance with the contract specifications.



# WELDING INSPECTION REPORT

*( Continued Page 3 of 3 )*

**Summary of Conversations:**

No significant conversations were reportable on this date.

**Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy, 510-385-5910, who represents the Office of Structural Materials for your project.

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| **Inspected By:** | Peterson,Art | Quality Assurance Inspector |
| **Reviewed By:** | Levell,Bill | QA Reviewer |